

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) Apparatus for full duplex wireless communication of information, comprising:
 - means for performing at least one of modulating and demodulating information signals; and
 - means for information transmission/reception, said information transmission/reception means providing for information transmission using a first polarization and for information reception using a second polarization to thereby isolate information transmission from information reception in full duplex communication.
2. (Original) Apparatus according to claim 1, wherein said performing means further includes:
 - a modulating means having a data input means, a data processing means, and a power output means.
3. (Withdrawn) Apparatus according to claim 2, wherein said data input means is configured to receive data modulated on an intermediate frequency of 2-3 GHz.

4. (Withdrawn) Apparatus according to claim 3, further including:
a local oscillator for modulating said data with a frequency on the order of 18 GHz.

5. (Withdrawn) Apparatus according to claim 2, wherein said power output means further includes:
plural, parallel amplification channels.

6. (Withdrawn) Apparatus according to claim 5, wherein said power output means further includes:
at least one coupler for splitting a signal from said data processing means into said plural, parallel amplification channels.

7. (Withdrawn) Apparatus according to claim 5, wherein said power output means further includes:
at least three couplers for splitting an output from said data processing means into four separate amplification channels, said output from said data processing means being amplified to produce at least about a 0.5 W output in each of said channels.

8. (Withdrawn) Apparatus according to claim 5, wherein said power output means further includes:
at least one device for combining outputs from each of said plural, parallel amplification channels into a single output channel.

9. (Withdrawn) Apparatus according to claim 6, wherein said at least one coupler is a 90° hybrid.

10. (Withdrawn) Apparatus according to claim 6, wherein said power output means further includes:

at least one coupler for combining outputs from said plural, parallel amplification channels into a single output channel.

11. (Original) Apparatus according to claim 1, wherein said information transmission/reception means includes:

a transmission antenna; and

a reception antenna separated by a distance from said transmission antenna.

12. (Original) Apparatus according to claim 1, wherein said information transmission/reception means further includes:

a single antenna having a dual polarization capability for transmitting information with a first polarization, and for receiving information with a second polarization.

13. (Withdrawn) Apparatus according to claim 1, further including:
regulator means having at least one DC voltage regulator for providing a regulated DC output voltage to said performing means.

14. (Withdrawn) Apparatus according to claim 13, wherein said DC voltage regulator further includes:

at least two DC voltage outputs; and

means for inhibiting a first of said two DC voltage outputs when a second of said two DC voltage outputs is above a predetermined threshold.

15. (Withdrawn) Apparatus according to claim 1, wherein said performing means further includes:

a demodulating means having a data input means and a data processing means.

16. (Withdrawn) Apparatus according to claim 2, wherein said performing means further includes:

a demodulating means having a data input means and a data processing means.

17. (Withdrawn) Apparatus according to claim 16, further including:
a local oscillator for supplying a modulating signal to said modulating means,
and for providing a demodulating signal to said demodulating means.

18. (Withdrawn) Apparatus according to claim 16, further including:
hermetically sealed housings for containing components of a transceiver,
components of said modulating means and said demodulating means being
mounted directly to said hermitically sealed housings.

19. (Currently Amended) A method for full duplex wireless communication of information, comprising the steps of:

performing at least one of modulating and demodulating information signals;

and

isolating transmission/reception of information by transmitting information with a first polarization and by receiving information with a second polarization in full duplex communication.

20. (Withdrawn) A method according to claim 19, wherein said step of performing at least one of modulating and demodulating information signals includes:

using an intermediate frequency of 2-3 GHz.

21. (Withdrawn) A method according to claim 20, wherein said step of performing at least one of modulating and demodulating information signals further includes a step of:

modulating said intermediate frequency using a local oscillator frequency on the order of 18 GHz.

22. (Withdrawn) A method according to claim 19, wherein said step of performing further includes a step of:

modulating information for transmission as a modulated information signal;

and

splitting said modulated information signal into plural, parallel amplification channels.

23. (Withdrawn) A method according to claim 22, wherein said modulated information signal is split into four separate amplification channels, said modulated information signal being amplified in each of said four separate amplification channels to produce at least about a 0.5 W output in each of said channels.

24. (Withdrawn) A method according to claim 23, further including a step of:

combining outputs from each of said plural, parallel amplification channels into a single output channel.

25. (Original) A method according to claim 19, wherein said step of isolating transmission/reception of information further includes the steps of:

transmitting information signals via a transmission antenna; and

receiving information signals via a reception antenna separated by a distance from said transmission antenna.

26. (Original) A method according to claim 19, wherein said step of isolating transmission/reception of information, further includes a step of:

transmitting information via a dual polarization antenna using a first polarization, and receiving information with a second polarization via said dual polarization antenna.

27. (Withdrawn) A method according to claim 19, further including a step of:

providing a regulated DC output voltage to perform said at least one of modulating and demodulating information signals.

28. (Withdrawn) A method according to claim 27, further including steps of:

providing a second regulated DC output voltage; and
inhibiting an output of said regulated DC output voltage when said second regulated DC output voltage is above a predetermined threshold.

29. (Currently Amended) A transceiver for full duplex wireless communication of information, comprising:

at least one of a modulator for modulating information and a demodulator for demodulating information; and

a dual polarization antenna for transmitting said information with a first polarization, and for receiving information with a second polarization opposite to said first polarization in full duplex communication.

30. (Withdrawn) A transceiver according to claim 29, wherein said at least one of a modulator and a demodulator further includes:

a local oscillator for modulating an intermediate frequency of 2-3 GHz with a frequency on the order of 18 GHz.

31. (Withdrawn) A transceiver according to claim 29, wherein said modulator further includes:

plural, parallel amplification channels.

32. (Withdrawn) A transceiver according to claim 31, further comprising:
at least one coupler for establishing said plural, parallel amplification channels.

33. (Withdrawn) A transceiver according to claim 31, further comprising:
at least three couplers for establishing said plural, parallel amplification channels, each of said amplification channels producing at least about a 0.5 W output.

34. (Withdrawn) A transceiver according to claim 32, further comprising:
at least one device for combining outputs of each of said plural, parallel amplification channels into a single output channel.

35. (Withdrawn) A transceiver according to claim 33, wherein said couplers are 90° hybrids.

36. (Original) A transceiver according to claim 29, wherein said dual polarization antenna includes:
a transmission antenna; and

a reception antenna separated by a distance from said transmission antenna.

37. (Original) A transceiver according to claim 29, wherein said dual polarization antenna includes:

a single antenna having a dual polarization capability for transmitting information with a first polarization, and for receiving information with a second polarization.

38. (Withdrawn) A transceiver according to claim 29, further including:
at least one DC voltage regulator for providing a regulated DC output voltage.

39. (Withdrawn) A transceiver according to claim 38, wherein said DC voltage regulator produces at least two DC voltage outputs, and further includes:
a switch for inhibiting a first of said two DC output voltages when a second of said two DC voltage outputs is above a predetermined threshold.

40. (Original) A transceiver according to claim 29, further including:
both said modulator and said demodulator.

41. (Withdrawn) A transceiver according to claim 40, further including:
a single local oscillator for modulating an intermediate frequency of said modulator, and for demodulating an intermediate frequency of said demodulator.

42. – 75. (Cancelled)

76. (Previously Presented) Apparatus according to claim 11, wherein said data input means is configured to receive data modulated on an intermediate frequency of 2-3 GHz.

77. (Previously Presented) Apparatus according to claim 76, further including:

a local oscillator for modulating said data with a frequency on the order of 18 GHz.

78. (Previously Presented) Apparatus according to claim 76, wherein said power output means further includes:

plural, parallel amplification channels.

79. (Previously Presented) Apparatus according to claim 78, wherein said power output means further includes:

at least one coupler for splitting a signal from said data processing means into said plural, parallel amplification channels.

80. (Previously Presented) Apparatus according to claim 78, wherein said power output means further includes:

at least three couplers for splitting an output from said data processing means into four separate amplification channels, said output from said data processing

means being amplified to produce at least about a 0.5 W output in each of said channels.

81. (Previously Presented) Apparatus according to claim 78, wherein said power output means further includes:

at least one device for combining outputs from each of said plural, parallel amplification channels into a single output channel.

82. (Previously Presented) Apparatus according to claim 79, wherein said at least one coupler is a 90° hybrid.

83. (Previously Presented) Apparatus according to claim 79, wherein said power output means further includes:

at least one coupler for combining outputs from said plural, parallel amplification channels into a single output channel.

84. (Previously Presented) Apparatus according to claim 11, further including:

regulator means having at least one DC voltage regulator for providing a regulated DC output voltage to said performing means.

85. (Previously Presented) Apparatus according to claim 84, wherein said DC voltage regulator further includes:

at least two DC voltage outputs; and

means for inhibiting a first of said two DC voltage outputs when a second of said two DC voltage outputs is above a predetermined threshold.

86. (Previously Presented) Apparatus according to claim 11, wherein said performing means further includes:

a demodulating means having a data input means and a data processing means.

87. (Previously Presented) Apparatus according to claim 11, wherein said performing means further includes:

a demodulating means having a data input means and a data processing means.

88. (Previously Presented) Apparatus according to claim 87, further including:

a local oscillator for supplying a modulating signal to said modulating means, and for providing a demodulating signal to said demodulating means.

89. (Previously Presented) Apparatus according to claim 87, further including:

hermetically sealed housings for containing components of a transceiver, components of said modulating means and said demodulating means being mounted directly to said hermitically sealed housings.

90. (Previously Presented) A method according to claim 25, wherein said step of performing at least one of modulating and demodulating information signals includes:

using an intermediate frequency of 2-3 GHz.

91. (Previously Presented) A method according to claim 90, wherein said step of performing at least one of modulating and demodulating information signals further includes a step of:

modulating said intermediate frequency using a local oscillator frequency on the order of 18 GHz.

92. (Previously Presented) A method according to claim 25, wherein said step of performing further includes a step of:

modulating information for transmission as a modulated information signal;

and

splitting said modulated information signal into plural, parallel amplification channels.

93. (Previously Presented) A method according to claim 92, wherein said modulated information signal is split into four separate amplification channels, said modulated information signal being amplified in each of said four separate amplification channels to produce at least about a 0.5 W output in each of said channels.

94. (Previously Presented) A method according to claim 93, further including a step of:

combining outputs from each of said plural, parallel amplification channels into a single output channel.

95. (Previously Presented) A method according to claim 25, further including a step of:

providing a regulated DC output voltage to perform said at least one of modulating and demodulating information signals.

96. (Previously Presented) A method according to claim 95, further including steps of:

providing a second regulated DC output voltage; and

inhibiting an output of said regulated DC output voltage when said second regulated DC output voltage is above a predetermined threshold.

97. (Previously Presented) A transceiver according to claim 36, wherein said at least one of a modulator and a demodulator further includes:

a local oscillator for modulating an intermediate frequency of 2-3 GHz with a frequency on the order of 18 GHz.

98. (Previously Presented) A transceiver according to claim 36, wherein said modulator further includes:

plural, parallel amplification channels.

99. (Previously Presented) A transceiver according to claim 98, further comprising:

at least one coupler for establishing said plural, parallel amplification channels.

100. (Previously Presented) A transceiver according to claim 98, further comprising:

at least three couplers for establishing said plural, parallel amplification channels, each of said amplification channels producing at least about a 0.5 W output.

101. (Previously Presented) A transceiver according to claim 99, further comprising:

at least one device for combining outputs of each of said plural, parallel amplification channels into a single output channel.

102. (Previously Presented) A transceiver according to claim 100, wherein said couplers are 90° hybrids.

103. (Previously Presented) A transceiver according to claim 36, further including:

at least one DC voltage regulator for providing a regulated DC output voltage.

104. (Previously Presented) A transceiver according to claim 103, wherein said DC voltage regulator produces at least two DC voltage outputs, and further includes:

a switch for inhibiting a first of said two DC output voltages when a second of said two DC voltage outputs is above a predetermined threshold.